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## Javascript:

\* Javascript is used to Provide Dynamic behaviour for web page and it is nothing but a scripting language

What:

\* Javascript is an high level, Programming, & Scripting language and Javascript is a single thread & Synchrones

\* Javascript is referred as Programming Language because it represents by using Syntax where as Syntax is used to write instructions which are given to browser

\* Javascript is also called as high level language because it represents by using alphabets, numbers, special characters as well as it is human Readable Language

Why

\* Provide Dynamic behaviour for web page.

\* It is also used to perform changes in HTML file like

i) Change style of HTML element

ii) Update HTML element

\* By using Javascript Programmers can Provide Page responsive behaviour which means depends up on users input Web page will Provide the response wheather its Valid or invalid.



\* Each and every Javascript Program is executable because

of interpreter

\* To execute (or) run the Javascript Program in every browser contains "Javascript Engine"

Interpreter: Executes the Program in line by line.

Javascript Engines:

Queue: first in, first out (FIFO)

Stack: last in, first out (LIFO)

Compiler: High to Low Level Language

1. Javascript Code Present in High level Language

Machine can understand Binary Level Language. Hence to convert High Level Language into Binary Level

Language browser contains Javascript Engine

2. Javascript implements "Just in time" concept [JIT]

like [Interpreter]. Which means at the same time line by line Javascript code will get checked

Syntactically and it will get executed.

Ex: Chrome - V8 Engine.

Edge - Chakra.

Scripting Language: Scripting languages are types of Programming

languages where the instructions are written for a run-time environment.

\* Javascript can use both frontend & backend

→ for frontend → To develop dynamic web pages.

→ for backend → Runtime Environment that is node.js.



Single thread: A single threaded language is one that can execute only one task at a time.

Synchronous: In systematically like queue.

Where:

1) using scripting language to develop web pages.

2) Gaming

3) Web Application

4) Server Application.

5) Smartwatch APPS.

flow:

\* With the `<script>` tag in bottom of body.

\* We can also use `<script>` in between the `<head>`

but there is a reason to write in the bottom of

the body.